WAVELENGTH STABILIZER OF NARROW BAND EXCIMER LASER

Patent number: JP2001119089
Publication date: 2001-04-27
Inventor: SUZUKI SHIGERU; SEKI TADAHIRA
Applicant: USHIO SOGO GIJUTSU KENKYUSHO K
Classification:
- international: H01S3/134
- european:
Application number: JP19990297730 19991020
Priority number(s): JP19990297730 19991020

Abstract of **JP2001119089**

PROBLEM TO BE SOLVED: To provide a wavelength stabilizer of a narrow band excimer laser, which can rotatably support a diffraction lattice itself relatively superior in durability to control a light incident angle on a diffraction lattice. SOLUTION: This wavelength stabilizer has a diffraction lattice rotating support mechanism for supporting a diffraction lattice 3 structuring a laser resonator for changing angle, and controls by driving the diffraction lattice rotating support mechanism, based on wavelength data from a wavelength detector. The diffraction lattice rotating support mechanism is structured by two pairs of cross-shaped leaf-spring part 15, a rotating member 12 which is connected to one end of each of the two pairs of cross-shaped leaf-spring part 15, a fixing member 11 which is connected to another end of each of the two pairs of cross-shaped leaf-spring part, and a rotation member driving mechanism 13 for rotating the rotation member 12 at a prescribed angle, based on a signal of the control part. A diffraction grating 3 is attached to the rotating member 12, so that one of the two pairs of cross-shaped leaf-spring part 15 is positioned above and the other is positioned below.